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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,342	03/26/2004	Joseph Milton Graham	8C20.1-270	1575

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SUITE 800  
ATLANTA, GA 30339

EXAMINER
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SAMS, MATTHEW C

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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06/04/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/811,342

Applicant(s)

GRAHAM ET AL.

Examiner

Matthew C. Sams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. This office action has been changed in response to the amendment filed on 3/15/2007.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9, 12 and 14-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Broyles et al. (US-7,142,868 hereinafter, Broyles).

Regarding claim 1, Broyles teaches a method for forecasting growth in a wireless telecommunications system, wherein the wireless telecommunications system includes a plurality of system sectors (Fig. 2), the method comprising the steps of:

determining the current system traffic level for the wireless telecommunications system; (Col. 5 lines 37-53 *i.e.* input may take the form of a table per market, indicating **average** values of network traffic capacity demands on each cell site)

determining the current minutes of use (MOU) for the wireless telecommunications system, (Col. 8 line 61 through Col. 9 line 24) the current MOU

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being the number of minutes used over a given time period; (Col. 4 lines 23-25 *i.e.* 1 hour = 60 minutes)

estimating the future minutes of use (MOU) for a future period of time (Col. 5 lines 62-63 *i.e.* the data is date bound) for the wireless telecommunications system; (Col. 5 lines 37-63, Col. 6 lines 20-36 and Col. 9 [ExpectedTraffic]) and

forecasting the future system traffic level for the wireless telecommunications system based on the current system traffic level, the current MOU and the estimated future MOU. (Col. 4 lines 38-51, Fig. 4, Col. 5 lines 37-63, Col. 6 lines 44-48, and Col. 8 line 61 through Col. 9 line 24)

Regarding claim 2, Broyles teaches allocating the future system traffic level to the plurality of system sectors. (Col. 6 lines 48-52)

Regarding claim 3, Broyles teaches the allocating step allocates the future system traffic level based on the percentage contribution of current system traffic level of the plurality of sectors to the total of the current system traffic level for the wireless telecommunications system. (Col. 6 line 53 through Col. 7 line 3 and Col. 7 lines 17-31)

Regarding claim 4, Broyles teaches the allocating step further comprises determining future equipment requirements for at least one of the plurality of system sectors. (Fig. 5 [510, 512 & 514])

Regarding claim 5, Broyles teaches the step of determining the impact of proposed relief sectors for the system. (Fig. 5 [510, 512 & 514])

Regarding claim 6, Broyles teaches the step of evaluating sector capacities relative to the available spectrum and the balance between coexisting technologies. (Col. 5 lines 54-63)

Regarding claim 7, Broyles teaches the current system traffic level determining step includes determining the average traffic per sector per time period for at least one of the plurality of system sectors. (Col. 5 lines 54-63)

Regarding claim 8, Broyles teaches the MOU in the wireless telecommunications system includes MOU during peak time periods and MOU during non-peak time periods, and wherein the basis for determining future MOU in the future MOU estimating step includes a growth factor for MOU during peak time periods. (Col. 5 line 37 through Col. 7 line 31)

Regarding claim 9, Broyles teaches the growth factor includes a ratio of an individual sector busy hour (ISBH) erlang growth factor to an MOU growth factor. (Col. 5 lines 54-63)

Regarding claim 12, Broyles teaches the future MOU estimating step includes estimating the number of future subscribers for the wireless telecommunications system. (Col. 5 lines 54-66)

Regarding claim 14, Broyles teaches the method further comprises forecasting growth in a wireless telecommunications system that uses a plurality of wireless transmission technologies, wherein the current system traffic level determining step, the current MOU determining step, the future MOU estimating step and the forecasting step

all are performed for at least one of the plurality of wireless transmission technologies. (Col. 5 lines 37-63, Col. 6 lines 44 through Col. 9 line 24)

Regarding claim 15, Broyles teaches the plurality of wireless transmission technologies includes AMPS, IS-136, TDMA, GSM and CDMA. (Col. 1 lines 12-20)

Regarding claim 16, Broyles teaches forecasting growth in the wireless telecommunications system for a first time period, wherein the future MOU estimating step further comprises determining future MOU for the first time period, and wherein the future data traffic level forecasting step further comprises forecasting future system traffic level based on the future MOU for the first time period, the current data traffic and the current MOU. (Col. 5 line 37 through Col. 9 line 24)

Regarding claim 17, the limitations of claim 17 are rejected as being the same reason set forth above in claim 1, which includes a computer (Col. 2 lines 15-18) for forecasting growth in the wireless telecommunications system. (Col. 4 line 52 through Col. 9 line 24)

Regarding claim 18, the limitations of claim 18 are rejected as being the same reasons set forth above in claim 2.

Regarding claim 19, the limitations of claim 19 are rejected as being the same reasons set forth above in claims 3 and 4.

Regarding claim 20, the limitations of claim 20 are rejected as being the same reasons set forth above in claim 5.

Regarding claim 21, the limitations of claim 21 are rejected as being the same reasons set forth above in claim 6.

Regarding claim 22, the limitations of claim 22 are rejected as being the same reasons set forth above in claims 1 and 17.

Regarding claim 23, the limitations of claim 23 are rejected as being the same reasons set forth above in claims 2 and 18.

Regarding claim 24, the limitations of claim 24 are rejected as being the same reasons set forth above in claims 5 and 20.

Regarding claim 25, the limitations of claim 25 are rejected as being the same reasons set forth above in claims 6 and 21.

Regarding claim 26, the limitations of claim 26 are rejected as being the same reasons set forth above in claim 1, 17 and 22.

Regarding claim 27, the limitations of claim 27 are rejected as being the same reasons set forth above in claim 2.

Regarding claim 28, the limitations of claim 28 are rejected as being the same reasons set forth above in claim 4.

Regarding claim 29, the limitations of claim 29 are rejected as being the same reasons set forth above in claim 5.

Regarding claim 30, the limitations of claim 30 are rejected as being the same reasons set forth above in claim 6.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broyles.

Regarding claim 10, Broyles teaches estimating the future MOU. (Col. 5 lines 54-63 and Col. 8 line 61 through Col. 9 line 24) Broyles differs from the claimed invention by not explicitly reciting determining the future MOU to include a buffer amount. However, it is obvious to one of ordinary skill in the art that Broyles teaches the future MOU includes an MOU buffer amount since Broyles teaches determining traffic amounts during high traffic periods. (Col. 5 lines 37-63)

Regarding claim 11, Broyles teaches determining the expected future network inputs that includes how many subscribers are in a market. (Col. 5 lines 54-63) Broyles differs from the claimed invention by not explicitly reciting determining the number of current subscribers for the wireless telecommunications system. However, it is obvious to one of ordinary skill in the art that Broyles has to teach determining the current number of subscribers in order to extrapolate the estimated future number of subscribers. (Col. 5 lines 54-66)

Regarding claim 13, Broyles teaches estimating the number of future subscribers for the wireless telecommunications system. (Col. 5 lines 54-63) Broyles differs from the claimed invention by not explicitly reciting including a subscriber buffer amount in estimating the future number of subscribers. However, it is obvious to one of ordinary skill in the art that Broyles teaches including a buffer amount since Broyles considers



determining the traffic during peak time which is higher than the average traffic. (Col. 5 lines 37-63)

### ***Response to Arguments***

6. Applicant's arguments filed 3/15/2007 have been fully considered but they are not persuasive.

In response to the applicant's argument regarding claim 1 that Broyles "does not disclose, teach or suggest using the two claimed metrics to forecast the further traffic level" (Page 10), the examiner disagrees.

Broyles teaches specifically in Fig. 4 [402] "Receiving into a computer current network **inputs** of a network", with the current network inputs listed to include "current network traffic information" according to "present demands" (Col. 5 lines 39-40), "Erlang traffic during a cell site high traffic time period" and "throughput traffic, and other traffic inputs". (Col. 5 lines 44-47) Broyles teaches an "average value of network traffic capacity demands" (Col. 5 lines 49-51), which would be analogous to the applicant's "snapshot" of current system traffic level. (Applicant's Remarks Page 9) Further, Broyles teaches an Erlang is a "measurement of telephone conversation traffic where one Erlang is equal to one full hour of conversation". (Col. 4 lines 23-25) Although the Erlang values seen within Broyles are scaled to hours instead of minutes, one of ordinary skill in the art would recognize the scaling factor is 60 to change from hours to minutes. (Applicant's Remarks Page 9) Since the claimed method does not relate how the current system traffic level, current minutes of use and future minutes of use are

related together in an equation (*I.D.* [0033]) to determine the future system traffic level, the claimed method does not yet differentiate from Broyles.

In response to the applicant's argument regarding "estimating the future minutes of use", Broyles teaches this limitation as "expected future network inputs 304" can be determined from network forecasts or estimations which include "total Erlangs", (Col. 5 lines 55-63), with an Erlang being a "measurement of telephone conversation traffic where one Erlang is equal to one full hour of conversation". (Col. 4 lines 23-25)

In response to the applicant's argument regarding "forecasting the future system traffic based on the current system MOU and the future MOU", Broyles teaches this limitation as "after inputting the current and expected future network information, a user of the computer 306 then selects a future date" "to observe the effects of the inputs on the current network at the future date". (Col. 6 lines 20-36)

The rejections with respect to claims 10, 11 and 13 are maintained in view of the further explanation above.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Sams whose telephone number is (571)272-8099. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MCS  
5/18/2007

  
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